10-18-00

jc953 U.S. PTO 10/16/00

jc520 U.S. PTO 09/690692 10/16/00

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PTO/SB/05 (4/98)
Approved for use through 09/30/2000. OMB 0651-0032
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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UTILITY PATENT APPLICATION TRANSMITTAL

(Only for new nonprovisional applications under 37 C.F.R. § 1.53(b))

Attorney Docket No.	41003.P023
First Inventor or Application Identifier	Eric Engstrom
Title	M & A For People to Simply Communicate Their...
Express Mail Label No.	EL605310938US

APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

ADDRESS TO: Assistant Commissioner for Patents, Box Patent Application, Washington, DC 20231

1. [XX] * Fee Transmittal Form *(e.g., PTO/SB/17)* *(Submit an original and a duplicate for fee processing)*
2. [XX] Specification [Total Pages 29] *(preferred arrangement set forth below)*
   - Descriptive title of the Invention
   - Cross References to Related Applications
   - Statement Regarding Fed sponsored R & D
   - Reference to Microfiche Appendix
   - Background of the Invention
   - Brief Summary of the Invention
   - Brief Description of the Drawings *(if filed)*
   - Detailed Description
   - Claim(s)
   - Abstract of the Disclosure
3. [XX] Drawing(s) *(35 U.S.C. 113)* [Total Sheets 7]
4. Oath or Declaration **(unsigned)** [Total Pages 4]
   a. ☐ Newly executed (original or copy)
   b. ☐ Copy from a prior application (37 C.F.R. § 1.63(d)) *(for continuation/divisional with Box 16 completed)*
      i. ☐ DELETION OF INVENTOR(S) Signed statement attached deleting inventor(s) named in the prior application, see 37 C.F.R. §§ 1.63(d)(2) and 1.33(b).

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5. ☐ Microfiche Computer Program *(Appendix)*
6. Nucleotide and/or Amino Acid Sequence Submission *(if applicable, all necessary)*
   a. ☐ Computer Readable Copy
   b. ☐ Paper Copy (identical to computer copy)
   c. ☐ Statement verifying identity of above copies

ACCOMPANYING APPLICATION PARTS

7. ☐ Assignment Papers (cover sheet & document(s))
8. ☐ 37 C.F.R.§3.73(b) Statement *(when there is an assignee)* ☐ Power of Attorney
9. ☐ English Translation Document *(if applicable)*
10. ☐ Information Disclosure Statement (IDS)/PTO-1449 ☐ Copies of IDS Citations
11. ☐ Preliminary Amendment
12. [XX] Return Receipt Postcard (MPEP 503) *(Should be specifically itemized)*
13. ☐ * Small Entity Statement(s) *(PTO/SB/09-12)* ☐ Statement filed in prior application, Status still proper and desired
14. ☐ Certified Copy of Priority Document(s) *(if foreign priority is claimed)*
15. ☐ Other: .....

16. **If a CONTINUING APPLICATION,** *check appropriate box, and supply the requisite information below and in a preliminary amendment:*

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No: _____/_____

Prior application information: Examiner _____ *Group / Art Unit:* _____

For CONTINUATION or DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 4b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

17. CORRESPONDENCE ADDRESS

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Signature		Date	10-16-2000

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TOTAL AMOUNT OF PAYMENT ($)

Complete if Known	
Application Number	
Filing Date	October 16, 2000
First Named Inventor	Eric Engstrom
Examiner Name	
Group / Art Unit	
Attorney Docket No.	41003.P023

09/690692 10/16/00

METHOD OF PAYMENT (check one)

1. ☐ The Commissioner is hereby authorized to charge indicated fees and credit any overpayments to:

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☐ Charge Any Additional Fee Required Under 37 CFR §§ 1.16 and 1.17

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FEE CALCULATION

1. BASIC FILING FEE

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description	Fee Paid
101	690	201	345	Utility filing fee	355.00
106	310	206	155	Design filing fee	
107	480	207	240	Plant filing fee	
108	690	208	345	Reissue filing fee	
114	150	214	75	Provisional filing fee	

SUBTOTAL (1) ($) 355.00

2. EXTRA CLAIM FEES

		Extra Claims		Fee from below	Fee Paid
Total Claims	30	-20** = 10	X	9.00	= 90.00
Independent Claims	3	- 3** = 0	X	40.00	= 0.00
Multiple Dependent					=

**or number previously paid, if greater; For Reissues, see below

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description
103	18	203	9	Claims in excess of 20
102	78	202	39	Independent claims in excess of 3
104	260	204	130	Multiple dependent claim, if not paid
109	78	209	39	** Reissue independent claims over original patent
110	18	210	9	** Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) ($) 90.00

FEE CALCULATION (continued)

3. ADDITIONAL FEES

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description	Fee Paid
105	130	205	65	Surcharge - late filing fee or oath	
127	50	227	25	Surcharge - late provisional filing fee or cover sheet.	
139	130	139	130	Non-English specification	
147	2,520	147	2,520	For filing a request for reexamination	
112	920*	112	920*	Requesting publication of SIR prior to Examiner action	
113	1,840*	113	1,840*	Requesting publication of SIR after Examiner action	
115	110	215	55	Extension for reply within first month	
116	380	216	190	Extension for reply within second month	
117	870	217	435	Extension for reply within third month	
118	1,360	218	680	Extension for reply within fourth month	
128	1,850	228	925	Extension for reply within fifth month	
119	300	219	150	Notice of Appeal	
120	300	220	150	Filing a brief in support of an appeal	
121	260	221	130	Request for oral hearing	
138	1,510	138	1,510	Petition to institute a public use proceeding	
140	110	240	55	Petition to revive - unavoidable	
141	1,210	241	605	Petition to revive - unintentional	
142	1,210	242	605	Utility issue fee (or reissue)	
143	430	243	215	Design issue fee	
144	580	244	290	Plant issue fee	
122	130	122	130	Petitions to the Commissioner	
123	50	123	50	Petitions related to provisional applications	
126	240	126	240	Submission of Information Disclosure Stmt	
581	40	581	40	Recording each patent assignment per property (times number of properties)	
146	690	246	345	Filing a submission after final rejection (37 CFR § 1.129(a))	
149	690	249	345	For each additional invention to be examined (37 CFR § 1.129(b))	

Other fee (specify) _____

Other fee (specify) _____

* Reduced by Basic Filing Fee Paid

SUBTOTAL (3) ($)

SUBMITTED BY				Complete (if applicable)	
Name (Print/Type)	Aloysius T.C. AuYeung	Registration No. (Attorney/Agent)	35,432	Telephone	(503) 534-2800
Signature				Date	10-16-2000

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Our Ref.: 41003.P023

APPLICATION FOR UNITED STATES LETTES PATENT

FOR

METHOD AND APPARATUS FOR PEOPLE TO SIMPLY COMMUNICATE THEIR LOCATION AND ACTIVITY

Inventor(s):
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Lake Oswego, Oregon 97035

"Express Mail" label number EL605310938US

METHOD AND APPARATUS FOR PEOPLE TO SIMPLY COMMUNICATE THEIR LOCATION AND ACTIVITY INFORMATION

FIELD OF THE INVENTION

The present invention relates to the fields of wireless communication devices and related devices. More specifically, the present invention relates to people (especially younger people) communicating their location and activity information via wireless communication.

BACKGROUND OF THE INVENTION

Advances in computer and telecommunication technology have led to wide spread adoption of mobile client devices, from the basic wireless telephones to function rich notebook sized computers that pack the power of a desktop computer. In between are web enabled wireless telephones, palmed sized personal digital assistants and so forth. As a result of the relatively low cost, today even youths, i.e., people who are not emancipated, are in possession of these devices.

Often times, these youths would find themselves in need of certain services such as the basic need of calling their parents/guardians and letting them know where they are or letting their friends know where they are in malls or around town. Under the prior art, i.e., the web enabled wireless telephones, palmed sized personal digital assistants and so forth, even though it may be a few key strokes to make the phone call, youths often find is too cumbersome to

make the call. Moreover, because of the number of keystrokes, the call cannot be placed discretely without being noticed by their peers, who often deems having to call and inform one's parents of one's whereabouts is especially "uncool".

Furthermore, under the prior art, even if youths are willing to make the call, youths would have to determine their current address/location. The added layer of difficulty just gives youths another excuse not to call.

In the mean time, in order to learn the current address/location of the youths, parents/guardians most likely have to call them or their friends, and this may cause the youths to be embarrassed and/or defensive due to their disposition against being constantly checked up on.

As a result, despite the advances in technology today, this prior art process is not youth friendly and may cause tension between youths and parents/guardians. Thus, a need exist for a more simple and efficient/effective approach for youths to notify their parents/guardians and each other of their whereabouts, and a non-intrusive approach for knowing the activities of the youths by the parents/guardians for their piece of mind.

SUMMARY OF THE INVENTION

A mobile client device, on behalf of a user, is equipped to submit an identity of the user to a messaging service, including the user's current location, with reduced number of keystrokes; in one embodiment, using a single function button. Once the messaging service receives the identity of the user, and the user's current location, the messaging service, in response, selects one or more eligible recipients from a list of candidate recipients to receive the user's current location, based at least in part on the identity of the user. The selected recipients, remotely disposed from the messaging service, receive the identity of the user and the user's current location for information purposes. The identity of the user and the user's current location may be transmitted to the selected remote recipients in any one of a number of message formats, using any one of a number of communication protocols. As a result, users, in particular, youths, are able to notify to recipients of interest to the users, such as their parents/guardians, of their whereabouts simply, efficiently and effectively.

Additionally, in some embodiments, the user's current location is provided with previously visited locations, together forming an activity log of the user.

Further, in some embodiments, certain eligible recipients, such as parents/guardians, are enabled to initiate receipt of a user's current location, or the user's activity log. As a result, parents/guardians are provided a non-intrusive way of keeping track of the locations and the activities of the youths for their peace of mind.

In yet other embodiments, the submission of the user's current location is triggered based at least in part on bio-metric data, such as the user's heart rate. In preferred ones of these embodiments, the submission includes selected ones of the bio-metric data.

In various embodiments, the user's client device may be a wireless telephone or a palm sized computing device.

BRIEF DESCRIPTION OF DRAWINGS

The present invention is illustrated by way of example and not by way of limitation in the figures of the accompanying drawings, in which the like references indicate similar elements and in which:

Figure 1 illustrates an overview of the present invention, in accordance with one embodiment;

Figure 2 illustrates a method view of the present invention in accordance with one embodiment;

Figures 3 and **4** illustrate a perspective and architectural view of an enhanced wireless telephone incorporated with the teachings of the present invention, in accordance with one embodiment;

Figure 5 illustrates the operational flow of the relevant aspects of enhanced wireless location application **416**, in accordance with one embodiment;

Figures 6 and **7** illustrate a perspective and architectural view of an enhanced palm sized computing device incorporated with the teachings of the present invention, in accordance with one embodiment;

Figure 8 illustrates the operational flow of the relevant aspects of the wireless web application of **Fig. 7**, in accordance with one embodiment;

Figure 9 illustrates an example server suitable for use to host messaging service **104** of **Fig. 1**, in accordance with one embodiment;

Figure 10 illustrates a data structure suitable for use to store data associated with identity of users and mobile client devices and recipients to facilitate practice of the present invention; and

Figure 11 illustrates the operational flow of the relevant aspect of messaging service **104**, in accordance with one embodiment.

DETAILED DESCRIPTION OF THE INVENTION

In the following description, various aspects of the present invention will be described. However, it will be apparent to those skilled in the art that the present invention may be practiced with only some or all aspects of the present invention. For purposes of explanation, specific numbers, materials and configurations are set forth in order to provide a thorough understanding of the present invention. However, it will also be apparent to one skilled in the art that the present invention may be practiced without the specific details. In other instances, well known features are omitted or simplified in order not to obscure the present invention.

Parts of the description will be presented using terms such as end-user interfaces, buttons, and so forth, commonly employed by those skilled in the art to convey the substance of their work to others skilled in the art. Parts of the description will be presented in terms of operations performed by a computing device, using terms such as submitting, requesting, selecting, confirming and so forth. As well understood by those skilled in the art, these quantities and operations take the form of electrical, magnetic, or optical signals capable of being stored, transferred, combined, and otherwise manipulated through mechanical and electrical components of a digital system. The term digital system includes general purpose as well as special purpose computing machines, systems, and the like, that are standalone, adjunct or embedded.

Various operations will be described in turn in a manner that is most helpful in understanding the present invention, however, the order of description should

not be construed as to imply that these operations are necessarily order dependent. Furthermore, the phrase "in one embodiment" will be used repeatedly, however the phrase does not necessarily refer to the same embodiment, although it may.

Referring now to **Figures 1** and **2**, wherein a block diagram illustrating an overview and a method view of the present invention in accordance with one embodiment are shown. As illustrated, a user, using a mobile client device **102**, initiates submission of an identity of the user, block **202**. In response, client device **102** notifies messaging service **104** of the submission of identity of the user, including in particular, the user's current location, block **204**. The submission of the identity of the user, including the user's current location, may be communicated to the messaging service **104**, via a wireless or wire line based communication link **108**, using any one of a number of communication protocols (such as TCP/IP) known in the art.

In one embodiment, the messaging service **104** accumulates the successively provided current locations, thereby forming an activity log of the user. As will be described later, the activity log may also include duration of time spent at the visited locations. In one embodiment, the activity log is updated each time the messaging service **104** is contacted with the user's current location. Alternatively, in one embodiment, the activity log may first be accumulated at the mobile client device **102** with the accumulated log being downloaded to the messaging service during one of the submissions of the user's current location. The accumulated activity log may then be subsequently

transmitted to a recipient requiring such information, such as a parent/guardian of the user.

In one embodiment, the identity of the user may be signed, to facilitate authentication of the identity as the intended user of the mobile client device.

Messaging service **104** enhanced with the teachings of the present invention, in turn, selects one or more recipients **106**, based at least on the identity of the user (after authentication, if the identity is signed), block **206**. As will be described in detail later, the selection may be made from a predetermined table of identities of users having corresponding eligible recipients. Eligible recipients of a user are pre-established with messaging service **104**. Recipients' eligibility may vary, some permanently, some for a finite duration. In addition to the basic delivery information, such as the preferred delivery format, i.e. email, fax and so forth, and the duration of the recipients' eligibility, recipients may also be associated with various selection attributes. Establishments of these recipient "properties" may be performed by the user while registering with messaging service **104**, or updated periodically thereafter. Registration and the subsequent updates may be facilitated using any one of a number of user interaction techniques known in the art.

In other embodiments, the selection may also be based on other criteria, such as intended recipients manually inputted by the user in the mobile client device to direct the messaging service to select those manually inputted recipients. Additionally, the manually inputted recipients may be recipients in addition to the recipients selected by the messaging service. In this manner,

recipients of the identity of the user and the user's current location are controlled without allowing wide dissemination of such information. For example, the manually inputted recipient may be a temporal companion of the user, where the user is trying to indicate to the temporal companion his/her location in a shopping mall, i.e., the two were to meet some place in the shopping mall, and they would like to know the current location of the each other.

In one embodiment, certain eligible recipients may be enabled to initiate submission of the identity of the user instead of the user initiating the submission. Again, such ability may be defined as a "property" of the eligible recipients. For example, a parent/guardian may want to know the locations and activities of their children without having to contact them. Accordingly, a user may pre-enable his/her parent/guardian to be able to initiate receipt of the user's current location or activity log.

Upon "selection" (i.e. either by the user or messaging service, as a result of the user or the recipient's initiation), messaging service **104** transmits the identity of the user, including last known location, and optionally, the previously visited locations, i.e. the activity log, to the selected recipient **106**, block **206**. The transmission may be made in the form of an email, a pager message, a facsimile transmission, and other electronic messages through communication link **110**, which may be a wireless or wire line based communication link, using any one of a number of communication protocols known in the art. .

In one embodiment, the user may manually restrict dissemination of the activity log. For example, a user would not desire to have a companion, such as a friend, acquire such information regarding their activities.

Alternatively, in one embodiment, the user may not manually restrict the dissemination of the activity log. For example, a selected recipient, such as a parent/guardian, may require such information at all times.

As a result, youths are able to notify to their parents/guardians and each other of their whereabouts simply and efficiently/effectively. Additionally, parents/guardians are provided a non-intrusive way of keeping track of the locations of the activities of the youths for their peace of mind.

Figures 3 and **4** illustrate a perspective and an architectural view of an enhanced wireless telephone as a client device for practicing the present invention, in accordance with one embodiment. As illustrated, similar to a conventional wireless telephone, wireless telephone **300** includes key-pad **302**, "talk" and "end talk" buttons **304**, cursor control buttons **306**, and display screen **308**. However, unlike prior art wireless telephones, wireless telephone **300** is equipped with a dedicated "Here I Am" function button **310** (hereinafter, simply "Here I Am" button. In alternate embodiments, buttons to manually input recipients and to restrict the activity log may be provided allowing for customization of the "Here I Am" button by the wireless telephone owner. Such customization may be facilitated via conventional support for setting the operating parameters of wireless telephone **300**, which is known in the art, accordingly will not be further described.

In one embodiment, the "Here I Am" button may not be a button at all, but a voice activated function. The user of the wireless telephone only needs to initialize the wireless telephone to recognize the user's voice and speech patterns. Once initialized, the user only needs to speak into the wireless telephone "here I am", and the wireless phone will initiate the submission of the identity of the user, including the user's current location. Voice recognition initialization of electronic devices is know in the art, accordingly, will not be discussed in further detail.

Similarly, from an architectural perspective, wireless telephone **300** includes elements found in conventional wireless telephones, such as micro-controller **402**, digital signal processor (DSP) **404**, non-volatile memory **406**, general purpose input/output (GPIO) interface **408**, and transmit/receive (TX/RX) **412**. However, wireless telephone **300** advantageously includes global positioning system (GPS) **410**, which is equipped to provide a user of wireless telephone **300** his/her current location. Further, wireless telephone **300** is provided with enhanced wireless location application **416** incorporated with the teachings of the present invention. In alternate embodiments, the present invention may be practiced with wireless telephone **300** merely having access to an external GPS unit instead (as opposed to an integrated GPS unit as illustrated).

Except for the teachings of the present invention incorporated with wireless location application **416**, the functions and constitutions of the various

enumerated elements are known in the art, accordingly will not be further described.

Figure 5 illustrates the operational flow of the relevant aspects of enhanced wireless location application **416**, in accordance with one embodiment. As illustrated, in response to a user initiating submission of an identity of a user, including the user's current location by pressing the dedicated "Here I Am" function key **310**, wireless location application **416** calls messaging service **104** and establishes a communication connection, block **502**. Next, for the illustrated embodiment, wireless location application **416** submits a pre-established identity of the user and the mobile client, including the user's current location (provided by GPS unit **410**), block **504**.

The pre-established identification of the user and the device will be utilized to select the appropriate recipient/recipients, e.g. the pre-established identification of Justin is utilized to select Justin's parents and/or Justin's friends. As described earlier, upon receipt of the identity of the user and the user's current location, messaging service **104** selects a recipient **106** based at least in part on the identity of the user, and transmits the identity of the user, along with the user's current location, and optionally, the accumulated activity log to the selected recipient **106** to provide information as to their whereabouts, block **506**.

In one embodiment, the messaging service **104** may access a navigation web site, for example, MapQuest™.com, Inc. of New York, NY, and retrieve location details such as, but not limited to, names of individual locations, e.g., the

user's current location is Johnny's Cafe at 1234 5th Avenue; previous location was Justin's department store at 5678 12th Avenue, and so forth.

Thus, it can be seen from the above description, a youth using a wireless telephone **300** incorporated with the present invention may notify their parents/guardians or friends of their whereabouts with a simple operation. In other words, the present invention may be practiced to offer a "one click" "here I am" function, from a mobile client device, such as a wireless mobile telephone.

Alternatively, in one embodiment, the recipient may initiate the submission of the identity of the user, including the user's current location by requesting the submission from a remote device such as, for example, a conventional telephone of the parent/guardian. The request may be achieved by an empowered recipient who is among the eligible recipients that may be selected and not by people not associated with the user of the mobile client device. Additionally, the recipient who desires to initiate the submission may be required to have knowledge of the identity of the user, including a password associated with the intended user, in order for the requested information to be provided. Thus, a parent/guardian may learn of the activities and location of their youth without being intrusive and calling the youth to ask question about their activities.

As a result, youths are able to notify to their parents/guardians and each other of their whereabouts and activities simply and efficiently/effectively. Additionally, parents/guardians are provided a non-intrusive way of keeping track of the activities of the youths for their piece of mind.

Figures 6 and **7** illustrate a perspective and an architectural view of an enhanced palm sized digital personal assistant (PDA) as a client device for practicing the present invention, in accordance with one embodiment. As illustrated, similar to a conventional palm sized PDA, PDA **600** includes control buttons **612** and display screen **602**. Architecturally, PDA **600** includes elements found in conventional PDA devices, such as RISC processor **702**, non-volatile memory **706**, general purpose input/output (GPIO) interface **708**, and transmit/receive (TX/RX) **712**. However, similar to the earlier described wireless telephone embodiment, PDA **600** includes global positioning system **710**, which is equipped to provide a user of PDA **600** his/her current location. Further, PDA **600** is provided with wireless web browsing application **716** designed for a wireless PDA device with limited computing power, communication bandwidth and display capability. As in the earlier described wireless telephone embodiment, in alternate implementations, PDA **600** may be merely provided with access to an external GPS unit instead (as opposed to an integrated GPS unit as illustrated).

Alternatively, because of the increased memory capabilities of the PDA **600** over the wireless mobile telephone **300**, in one embodiment, the GPS **410** may be equipped to track previous locations as well as current location, including a duration of time spent at the locations. In this embodiment, the PDA **600** accumulates an activity log and stores the accumulated activity log in memory **706**. The user may download the accumulated activity log to the messaging service **104** along with the identity and the user's current location. Alternatively,

the PDA **600** may inform the user that a download from the PDA **600**, may be required due to space availability in memory **706**. Tracking locations and durations of time spent at the tracked locations are well known and commonly associated with GPS devices, accordingly, will not be discussed in further detail.

Rendered on display screen **602** is a service request "Here I Am" "home" page. For the illustrated embodiment, the "Here I Am" "home" page includes a "drop down" menu of recipients **604**, "Here I Am" button **606**, and current location display **608**. Thus, under this embodiment, a user of PDA **600** may manually select one or more recipients of the identity of the user and the user's current location, and optionally, an accumulated activity log of the user, from the "drop down" menu **604**. The recipients may include such recipients as parents/guardians and friends of the user.

The recipients included in "drop down" menu **604** for selection may be predetermined and set up by the user. Except for submitting and transmitting the identity of the user, including the current the user's current location, and optionally, the accumulated activity log, the functions and constitutions of the illustrated elements are known in the art, accordingly will not be further described.

Figure 8 illustrates the operational flow of the relevant aspects of wireless web browsing application **716** executing the "Here I Am" "home" page, in accordance with one embodiment. As illustrated, in response to a user initiating a "Here I Am" "home" page (e.g. by selecting a "Here I Am" icon (not illustrated)), application **716** causes a call to be placed to messaging service **104** (e.g. by an

underlying communication service), and a communication connection (such as a HTTP connection using TCP/IP) be established, block **802**. Next, application **716** retrieves the "Here I Am" "home" page from messaging service **104**, block **804**. Thereafter, the code associated with the retrieved "Here I Am" "home" page (e.g. an applet downloaded with the "home" page) monitors for user inputs or interactions with the "Here I Am" "home" page, block **806**.

Upon detection of an user input, the associated code further determines if the user has selected the "Here I Am" button **606**, block **812**. If not, it is assumed that the user is interacting with "drop down" recipient menu **604**, block **814**. The selected recipient field **604** is updated accordingly, depending on the user's inputs. On the other hand, if the user has selected the "Here I Am" button **606**, the associated code submits an identity of the user, including the user's current location, and optionally, the accumulated activity log (using the established communication connection), block **816**.

For the illustrated embodiment, it is further contemplated that messaging service **104** may resolve the geographical information received from PDA **600** to a qualitative description of the current location, e.g. "5th & Union", **608**. Messaging service **104** may do so by accessing a geographic information file (GIF) (not shown), using the coordinates of the current location. GIF is known in the art. This further assists the recipient in confirming the location of the user.

In one embodiment, as discussed above with respect to the wireless telephone **300**, messaging service **104** may resolve the geographical information received from PDA **800** by accessing a navigation web site, **610**.

As a result, youths are able to notify to their parents/guardians and each other of their whereabouts and activities simply and efficiently/effectively using PDAs, as well. Additionally, parents/guardians are provided a non-intrusive way of keeping track of the activities of the youths for their peace of mind.

Figure 9 illustrates an example server suitable for use to host messaging service **104** of **Fig. 1**, in accordance with one embodiment. As shown, server **900** includes one or more processors **902** and system memory **906**. Additionally, computer system **900** includes mass storage devices **907** (such as diskette, hard drive, CDROM and so forth), GPIO **908** (for interfacing with I/O devices such as keyboard, cursor control and so forth) and communication interfaces **912** (such as network interface cards, modems and so forth). The elements are coupled to each other via system bus **914**, which represents one or more buses. In the case of multiple buses, they are bridged by one or more bus bridges (not shown). Each of these elements perform its conventional functions known in the art. In particular, system memory **904** and mass storage **906** are employed to store a working copy and a permanent copy of the programming instructions implementing messaging service **104**. Except for its use to host the novel messaging service of the present invention, the constitution of these elements **902-914** are known, and accordingly will not be further described.

Figure 10 illustrates a data structure suitable for use to store data associated with identity of users, last submitted locations of users, and recipients to facilitate practice of the present invention. As illustrated, table **1000** includes a column **1002** for storing an identifier for each "enrolled" user. In addition, table

1000 further includes a number of columns **1004** for storing the various basic information associated with an "enrolled" user, such as the user's name, user's "signature", and password associated with the user, e.g., user name: Justin; Justin's password: DaDa, and so forth. In particular, preferably a column is provided to store one or more indicators for the preferred mode of communication.

Table **1000** also includes a number of columns **1006-1010** for storing the eligible recipients provided by the user, and their "properties". The recipient may be placed in columns for family **1006**, such as parents/guardians, friends **1008**, and other people **1010** that the user may want to add to provide "Here I Am" information. Additionally, table **1000** includes other columns for storing the various early discussed properties, such as the duration a recipient is eligible to receive the location information, whether the recipient is eligible to contact messaging service **104** to receive the location information.

Table **1000** is illustrated as a single table for ease of understanding. As those skilled in the art will appreciate, a data structure involving multiple tables may be employed for storing the various data. In certain columns, such as recipients, pointers to the actual data, for example, to actual data such as the recipient's email address or their wireless telephone numbers, may be preprogrammed.

Figure 11 illustrates the operational flow of the relevant aspect of messaging service **104**, in accordance with one embodiment. As illustrated, upon invocation, messaging service **104** awaits for a submission of an identity of

a user, including the user's current location, and optionally, an accumulated activity log of the user, or a request for its "Here I Am" "home" page, **1106** and **1102**. In response to a request for the "Here I Am" "home" page **1104**, messaging service **104** returns the "Here I Am" "home" page as requested, **1104**. Thereafter, the process continues at **1102** again.

However, if a submission of an identity of a user, including the user's current location, and optionally, the accumulated activity log of the user, is received instead, as described earlier, messaging service **104** selects one or more recipient based at least on the received identity of the user, **1108**. Furthermore, the current location of the user may be added to previously received and stored last locations of the user by the messaging service **104**, including any accumulated activity logs that are also received. Then, the messaging service **104** transmits the identity of the user together with the user's current location, and optionally, accumulated activity log of the user, to the selected recipients **1110**.

In one embodiment, in order to transmit parts or all of the information, including the optional activity log of the user, the messaging service **104** may require a password from the selected recipient. Alternatively, in another embodiment, the messaging service **104** may transmit all of the information, including the optionally accumulated activity log of the user if the selected recipient is a parent/guardian corresponding to the identity of the user.

Additionally, if a transitory recipient is manually inputted, the identity of the user, along with the user's current location, and optional activity log, is transmitted to the manually inputted transient recipient.

As previously discussed, youths are able to notify to their parents/guardians and each other of their whereabouts and activities simply and efficiently/effectively. Additionally, parents/guardians are provided a non-intrusive way of keeping track of the activities of the youths for their piece of mind.

Referring now back to **Figures 3-5**, in some embodiments, wireless mobile phone **300** include various sensors (not shown) for sensing and collecting bio-metric data of the user holding wireless mobile phone **300** for various bio-metrics. Examples of these bio-metric data include heart rate data of the user. Wireless mobile phone having integrated bio-metric sensors, such as heart rate sensors, is the subject of co-pending U.S. Application, number <to be assigned>, entitled "A Wireless Mobile Phone Having An Integrated Heart Rate Monitor", filed contemporaneously with the present invention. The co-pending application is hereby fully incorporated by reference.

For some of these embodiments, the earlier described submission of the user's current location is triggered (blocks **502-504** of **Fig. 5b)** is further based on the bio-metric data collected by wireless mobile phone **300**, e.g. when the heart rate of the user holding phone **300** exceeds certain pre-determined threshold, or for other bio-metrics falling below a predetermined threshold. The predetermined not-to-exceed/not-to-fall-below threshold preferably is programmable by the user,

using any one of a number of configuration techniques known in the art. For presently preferred ones of these embodiments, the submission (block **504**) also includes the bio-metric data.

Thus, it can be seen the present invention for facilitating a user in communicating his/her current location in a simple, efficient and effective way may also be beneficial to e.g. older citizens, who might want their current locations, including their bio-metric data, be easily communicated to a number of desired recipients, such as the users' doctors, nurses, spouses, children, co-workers and so forth. These recipients may be specified to messaging service **104** as earlier described.

Accordingly, methods and apparatuses for people to simply communicate their location and activity information has been described. While the present invention has been described in terms of the above illustrated embodiments, in particular, being especially useful to youths, those skilled in the art will recognize that the invention is not limited to the embodiments described. The present invention can be practiced with modification and alteration within the spirit and scope of the appended claims such as, practiced by adults. Thus, the description is to be regarded as illustrative instead of restrictive on the present invention.

CLAIMS

What is claimed is:

1. A method comprising:

a mobile client device, on behalf of a user, submitting an identity of the user to a messaging service, including a current location of the user;

the messaging service, in response, selecting a recipient remotely disposed from the mobile client device and the messaging service to receive the user's current location for information purpose, based at least in part on the identity of the user; and

transmitting the user's current location to the selected recipient.

2. The method of claim 1, wherein the method further comprising accumulating submitted locations of the user to form an activity log of the user.

3. The method of claim 2, wherein said recipient is also to receive the activity log, and said transmitting includes transmitting said activity log..

4. The method of claim 3, wherein the activity log of the user further comprises a duration of time at the locations visited by the user.

5. The method of claim 1, wherein submitting comprises the mobile client device automatically determining at least a selected one of the user's current location, and one or more bio-metric data of the user.

6. The method of claim 5, wherein automatically determining of the user's current location comprises the mobile client device accessing a global positioning system (GPS).

7. The method of claim 1, wherein the method further comprises the messaging service accessing a navigation web site to obtain map related information, and said transmitting further comprises including said obtained map related information.

8. The method of claim 1, wherein said submitting comprises submitting automatically in response to a singular user action, selecting a dedicated function button or a bio-metric data of the user exceeding a pre-determined threshold.

9. The method of claim 1, wherein said transmitting is performed automatically in response to a request from an empowered recipient instead.

10. The method of claim 1, wherein submitting comprises submitting via a wireless communication connection.

11. The method of claim 1, wherein said selecting comprises selecting the one or more recipients from a predetermined table of candidate recipients, with each candidate recipient having an eligibility duration.

12. The method of claim 1, wherein transmitting comprises transmitting via a wireless communication connection.

13. The method of claim 1, wherein said selecting comprises selecting a transitory recipient manually input by the user at the mobile client device.

14. A mobile apparatus comprising:

a storage medium having stored therein a plurality of instructions that are machine executable, wherein the executing instructions operate to submit an identity of a user, and a current location of the user to a messaging service, on behalf of the user, to enable the messaging service to select, in response, a recipient remotely disposed from the apparatus and the message service to receive the user's current location, based at least in part on the identity of the user, and transmit the user's current location to the selected one or more recipients; and

a processor coupled to the storage medium to execute the instructions.

15. The apparatus of claim 14, wherein the executing instructions further operate to accumulate submitted locations of the user to form an activity log of the user.

16. The apparatus of claim 14, wherein the executing instructions operate to automatically determine at least a selected one of the user's current location, and one or more bio-metric data of the user.

17. The apparatus of claim 16, wherein the executing instructions operate to access a global positioning system (GPS).

18. The apparatus of claim 14, wherein the messaging service further operates to access a navigation web site.

19. The apparatus of claim 14, wherein the executing instructions operate to submit automatically in response to a singular user action, selecting a dedicated function button or a bio-metric data of the user exceeding/falling below a predetermined threshold.

20. The apparatus of claim 14, wherein the messaging service operates to transmit the user's location information automatically in response to a request from an empowered recipient instead.

21. The apparatus of claim 14, wherein the executing instructions operate to submit the user's current location via a wireless communication connection.

22. An apparatus comprising:

a storage medium having stored therein a plurality of instructions to receive a submission of an identity of a user and a current locaiton of the user from a mobile client device of the user, to select, in response, one or more recipients toreceive the user's current location, based at least in part on the identity of the user, and to transmit the user's current location to the selected one or more recipients.

23. The apparatus of claim 22, wherein the executing instructions further operate to accumulate submitted locations of the user to form an activity log of the user.

24. The apparatus of claim 22, wherein the executing instructions further operate to facilitate the user in setting up recipients eligible to receive the user's current location.

25. The apparatus of claim 24, wherein the executing instructions further operate to facilitate the user in setting eligibility durations for the recipients.

26. The apparatus of claim 22, wherein the executing instructions further operate to access a navigation web site to obtain map related information to include the map related information with said current location of the user.

27. The apparatus of claim 22, wherein the executing instructions operate to receive said identity and current location of the user submitted automatically in response to a singular user action, selecting a dedicated function button or a bio-metric data exceeding/falling below a predetermined threshold.

28. The apparatus of claim 22, wherein the executing instructions further operate to transmit the user's current location automatically in response to a request from an empowered recipient instead.

29. The apparatus of claim 22, wherein the executing instructions take into consideration candidate recipients' eligibility duration when performing said selection of recipients. .

30. The apparatus of claim 22, wherein the executing instructions further operate to receive from the mobile client device, the user's bio-metric data, and transmitting the bio-metric data to one or more eligible recipients.

ABSTRACT OF THE DISCLOSURE

A mobile client device, on behalf of a user, is equipped to submit an identity of the user to a messaging service, including the user's current location. Once the messaging service receives the identity of the user, and the user's current location, the messaging service, in response, selects one or more recipients remotely disposed by the mobile client device and the messaging service to receive the user's current location, based at least in part on the identity of the user. The recipient receives the the user's current location for information purposes. In one embodiment, the identity of the user, in addition the user's current location, is also transmitted to the selected one or more recipients. As a result, users, in particular, youths, are able to notify to recipients, such as their parents/guardians, and each other of their whereabouts simply, efficiently and effectively. In other embodiments, the submission is triggered based on bio-metric data of the user, and includes the triggering bio-metric data. These embodiments have special applications for older users. Additionally, some recipients, such as parents/guardians, are empowered to initiate receipt of the user's current location, thereby providing a non-intrusive way of keeping track of the locations of the youths for their peace of mind. In various embodiments, the client device may be a wireless telephone or a palm sized computing device.

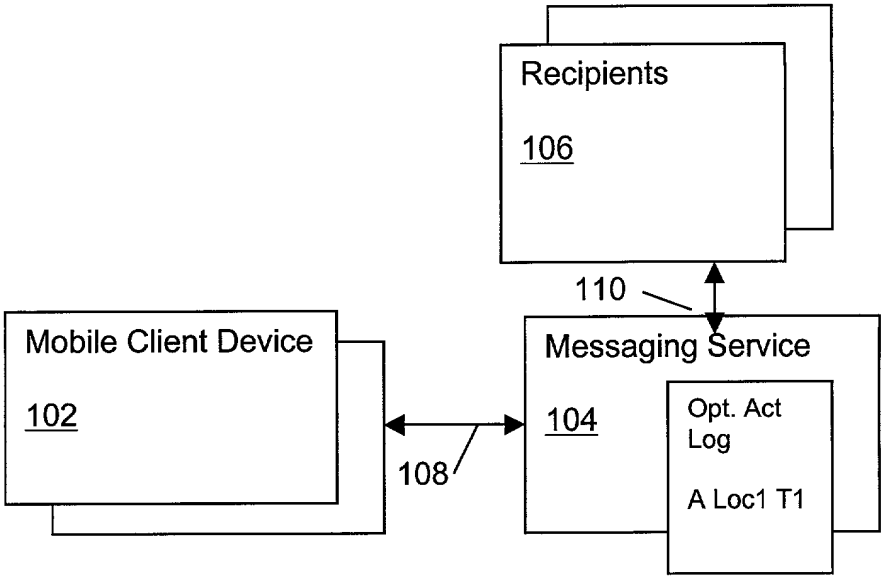

Figure 1

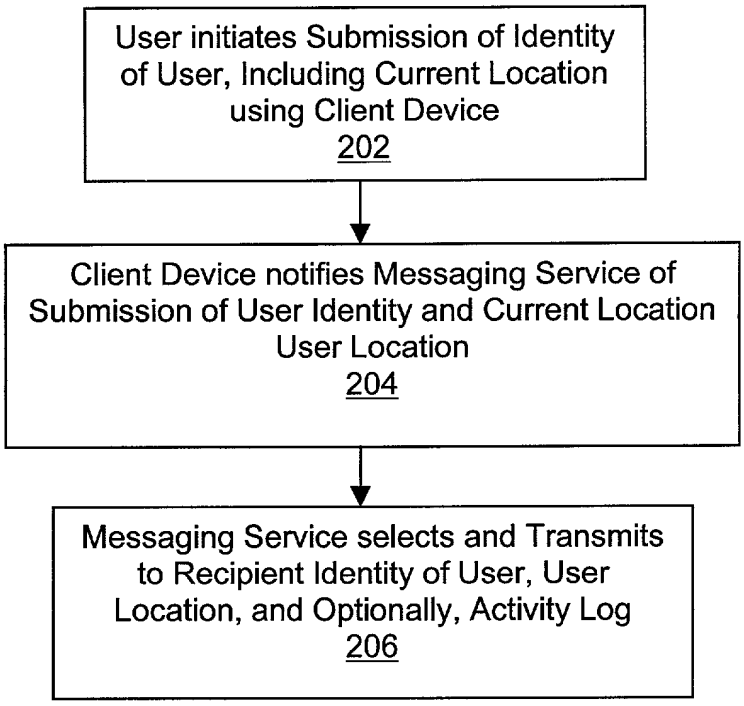

Figure 2

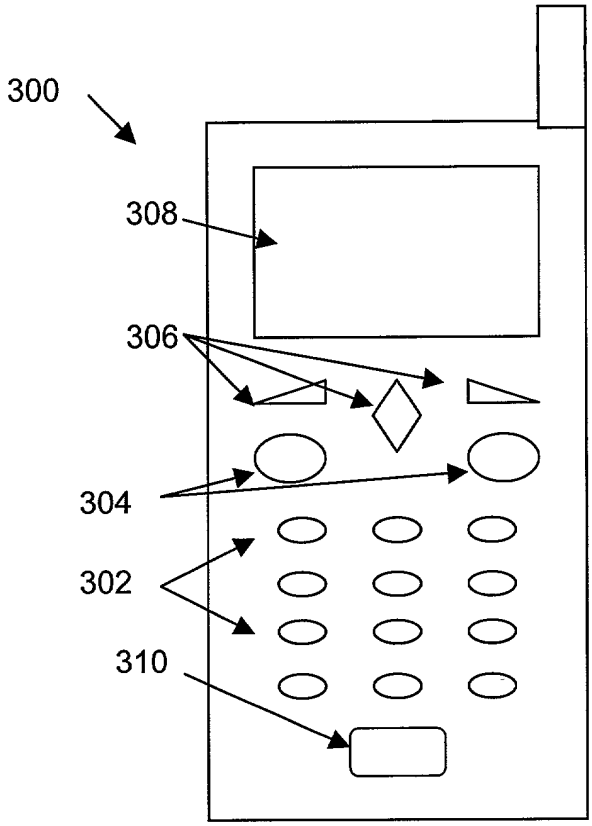

Figure 3

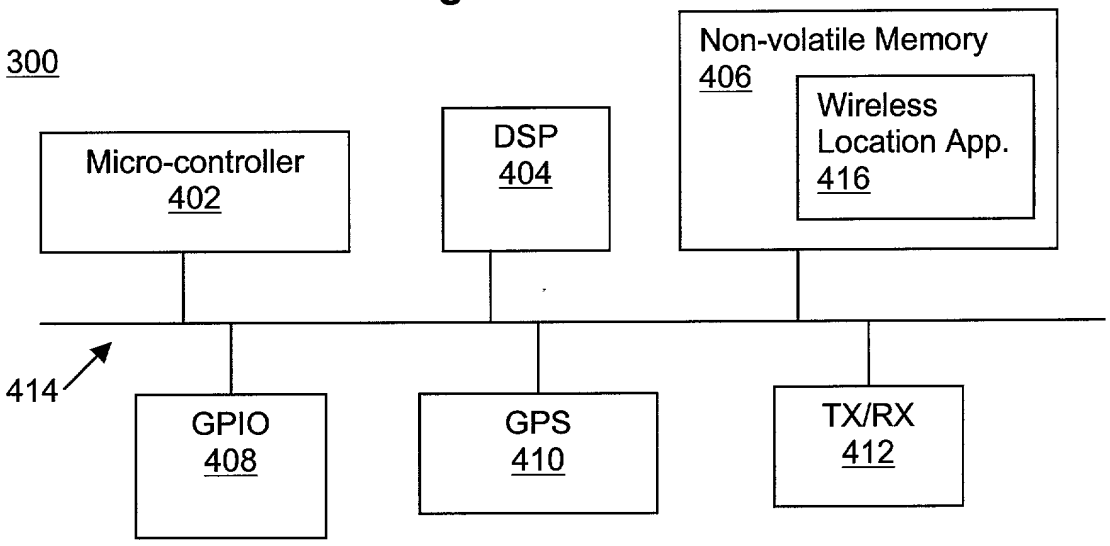

Figure 4

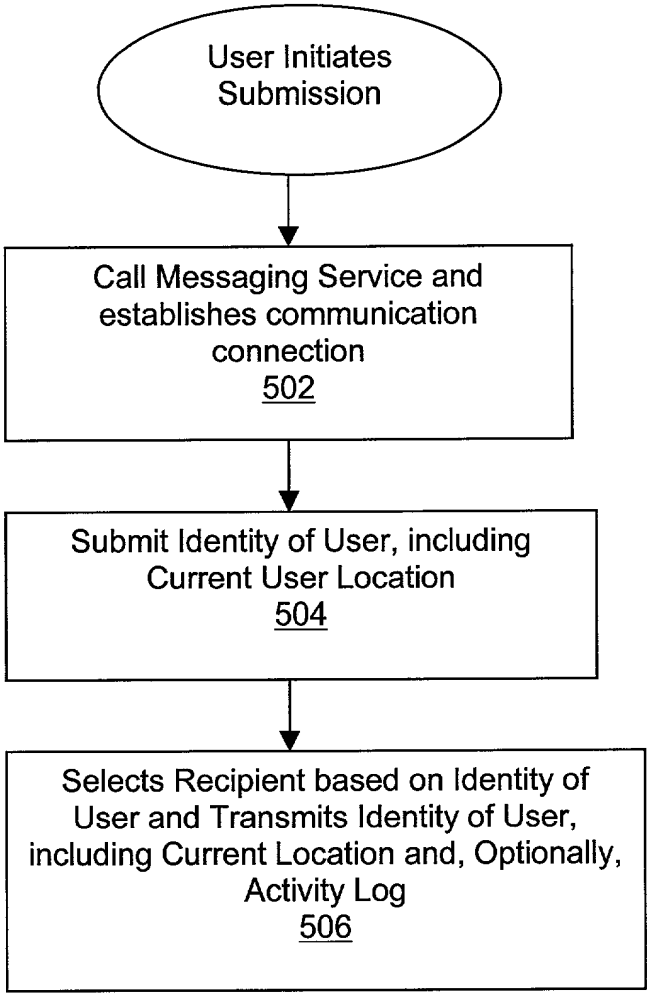
User Initiates Submission
Call Messaging Service and establishes communication connection
502
Submit Identity of User, including Current User Location
504
Selects Recipient based on Identity of User and Transmits Identity of User, including Current Location and, Optionally, Activity Log
506

Figure 5

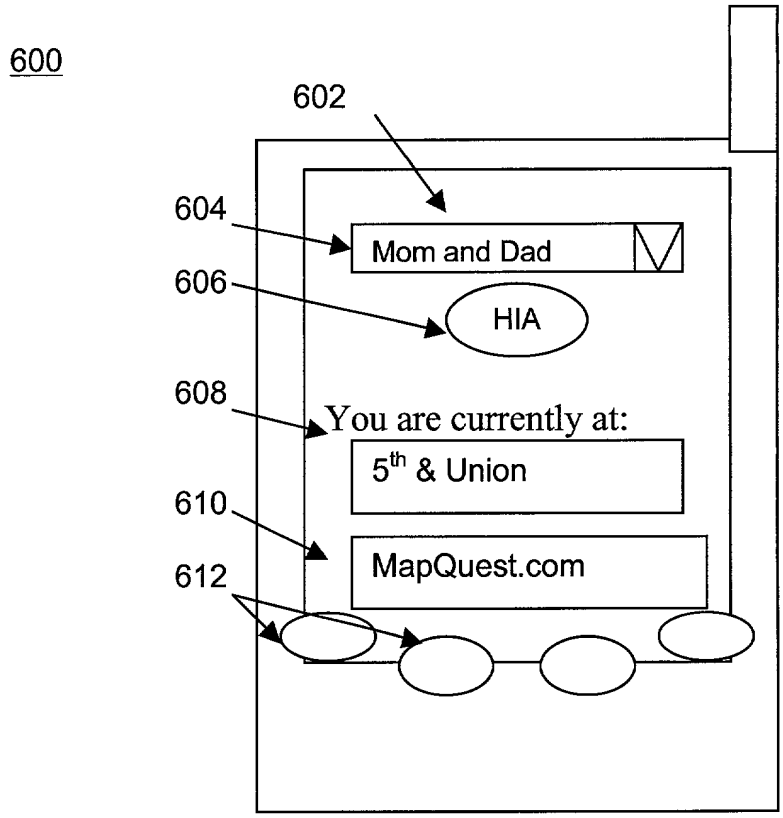

Figure 6

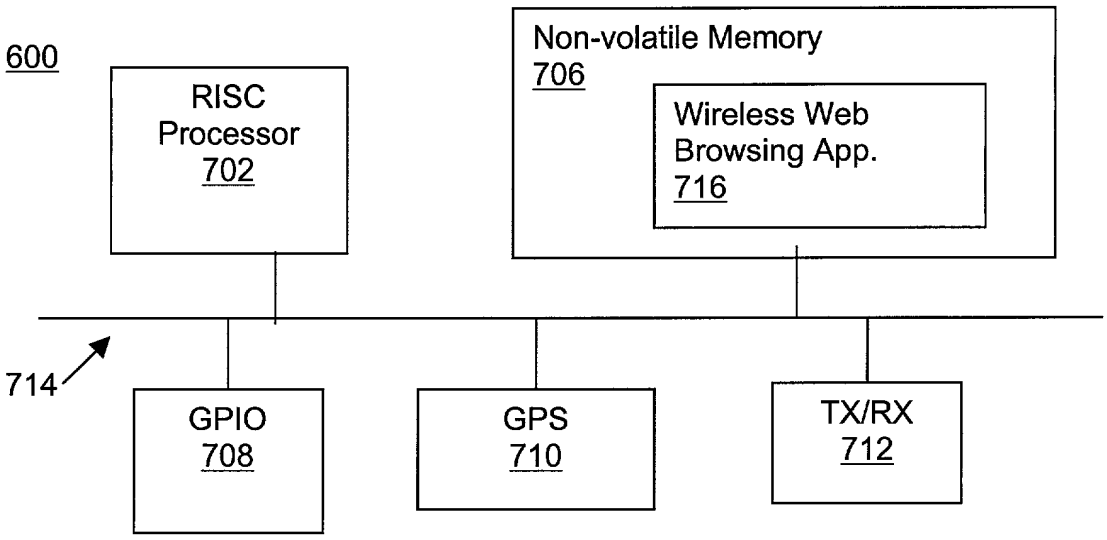

Figure 7

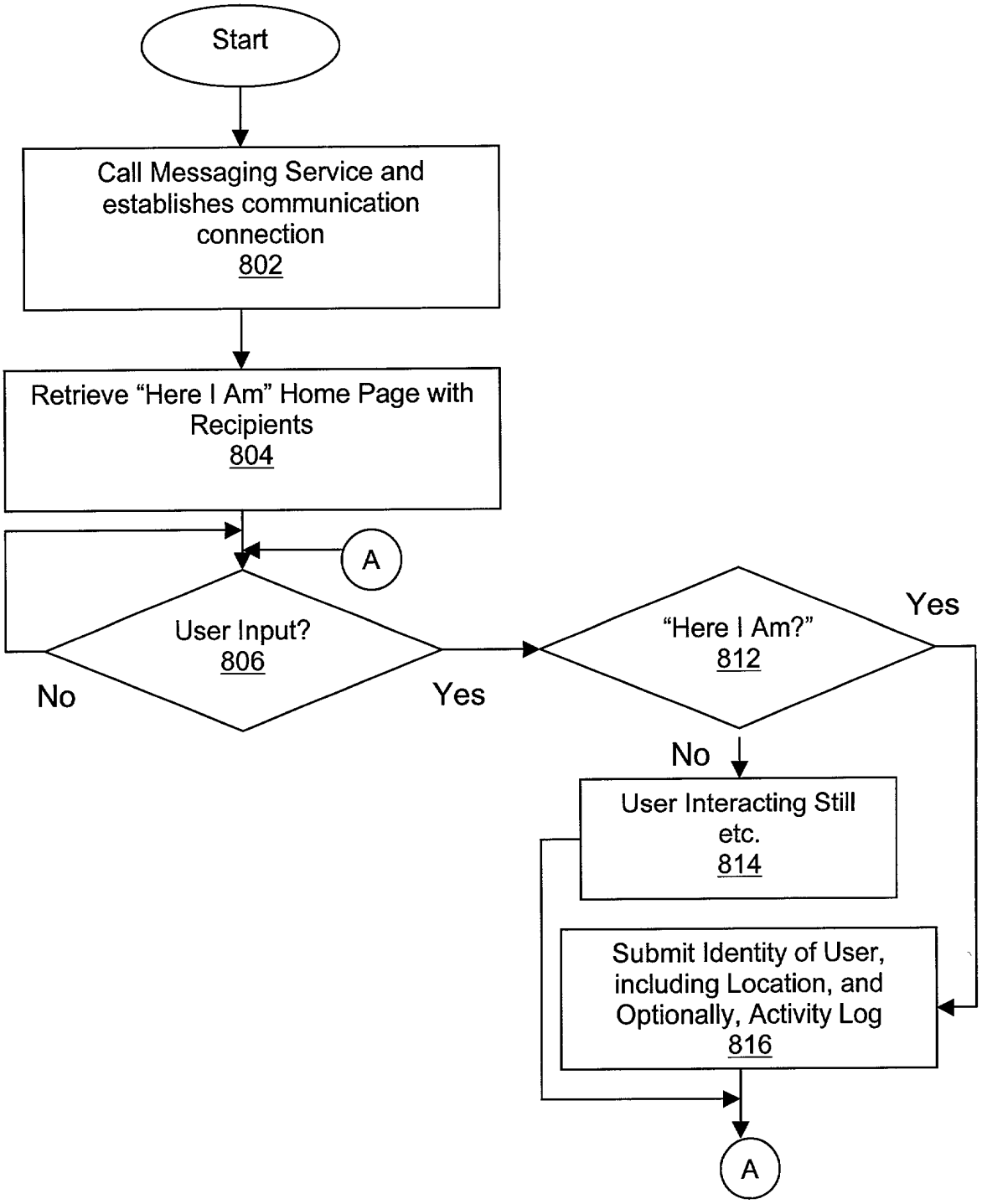
Start
Call Messaging Service and establishes communication connection
802
Retrieve "Here I Am" Home Page with Recipients
804
A
User Input?
806
No
Yes
"Here I Am?"
812
Yes
No
User Interacting Still etc.
814
Submit Identity of User, including Location, and Optionally, Activity Log
816
A

Figure 8

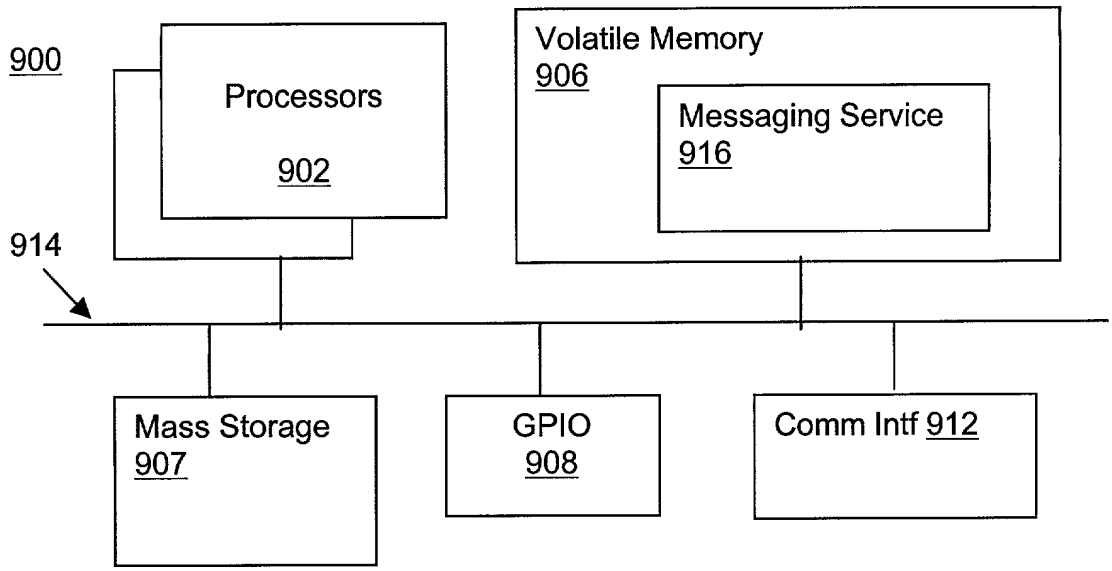

Figure 9

1000

User ID 1002	User Name and Password 1004.	Recipients (Family) 1006	Recipients (Friends) 1008	Recipients (Other) 1010

Figure 10

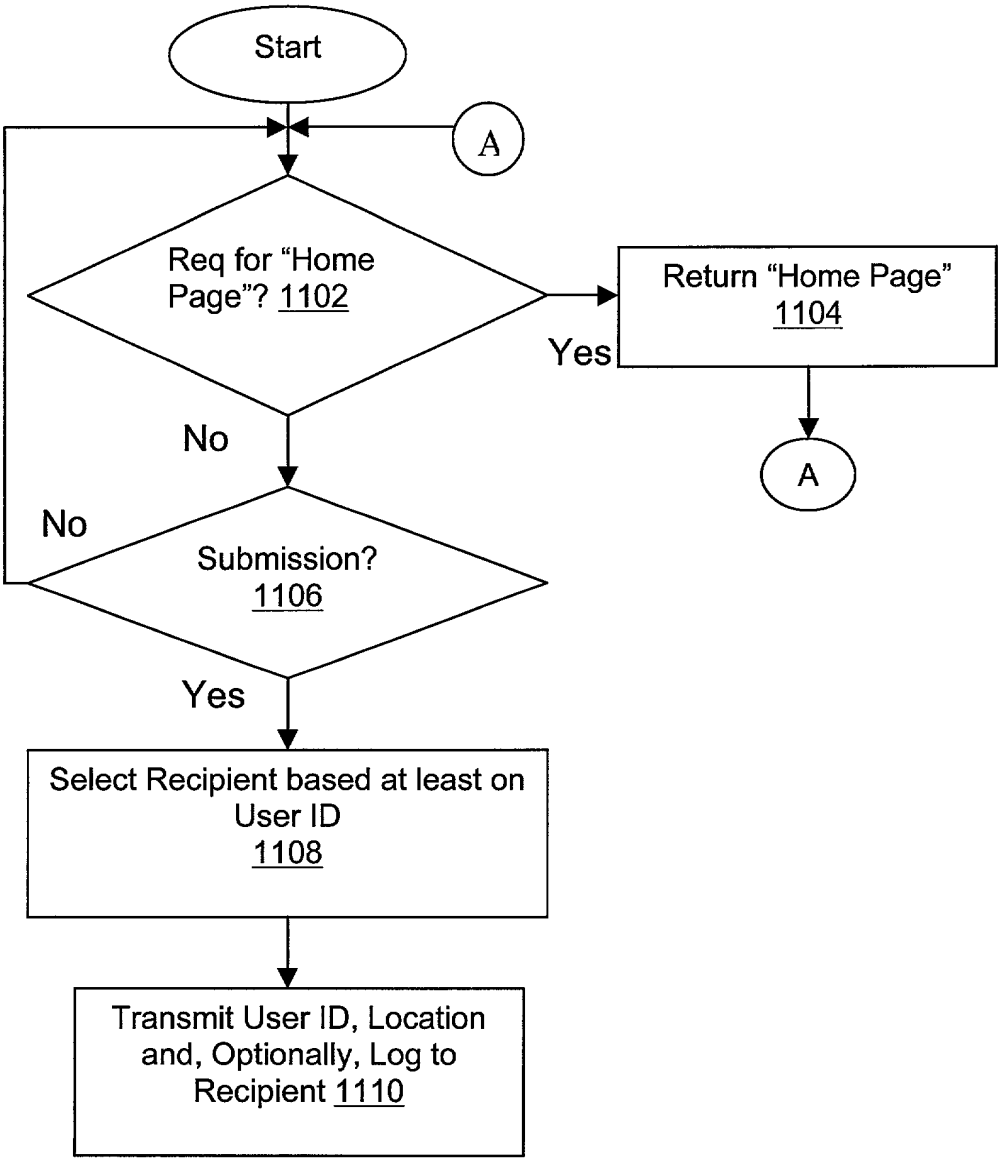
Start
A
Req for "Home Page"? 1102
Yes
Return "Home Page" 1104
A
No
No
Submission? 1106
Yes
Select Recipient based at least on User ID 1108
Transmit User ID, Location and, Optionally, Log to Recipient 1110

Figure 11

Attorney's Docket No.: 41003.P023 PATENT

DECLARATION AND POWER OF ATTORNEY FOR PATENT APPLICATION

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below, next to my name.

I believe I am the original, first, and sole inventor (if only one name is listed below) or an original, first, and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

Method and Apparatus For People To Simply Communicate Their Location And Activity

the specification of which

_X_ is attached hereto.
___ was filed on _____ as
United States Application Number _____
or PCT International Application Number_____
and was amended on _____.
(if applicable)

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claim(s), as amended by any amendment referred to above.

I acknowledge the duty to disclose all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, Section 119(a)-(d), of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

Prior Foreign Application(s)			Priority Claimed	
(Number)	(Country)	(Day/Month/Year Filed)	Yes	No
(Number)	(Country)	(Day/Month/Year Filed)	Yes	No
(Number)	(Country)	(Day/Month/Year Filed)	Yes	No

I hereby claim the benefit under title 35, United States Code, Section 119(e) of any United States provisional application(s) listed below

(Application Number) Filing Date

(Application Number) Filing Date

I hereby claim the benefit under Title 35, United States Code, Section 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, Section 112, I acknowledge the duty to disclose all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application:

(Application Number)	Filing Date	(Status -- patented, pending, abandoned)

I hereby appoint Aloysius T. C. AuYeung, Reg. No. 35,432; Robert A. Diehl, Reg. No. 40,992, Jason K. Klindtworth (Reg. No. P47,211) and Robert T. Watt (Reg. No. 45,890) my patent attorney/agent; with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected herewith.

Send correspondence to Aloysius T.C. AuYeung,
(Name of Attorney or Agent)
Columbia IP Law Group, LLC, 4900 SW Meadows Rd., Suite 109, Lake Oswego, OR 97035.
and direct telephone calls to Aloysius T.C. AuYeung, (503) 534-2800.
(Name of Attorney or Agent)

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

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PTO/SB/05 (4-98) Approved for use through 09/30/98. OMB 0651-0032
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Title 37, Code of Federal Regulations, Section 1.56
Duty to Disclose Information Material to Patentability

(a) A patent by its very nature is affected with a public interest. The public interest is best served, and the most effective patent examination occurs when, at the time an application is being examined, the Office is aware of and evaluates the teachings of all information material to patentability. Each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability as defined in this section. The duty to disclosure information exists with respect to each pending claim until the claim is cancelled or withdrawn from consideration, or the application becomes abandoned. Information material to the patentability of a claim that is cancelled or withdrawn from consideration need not be submitted if the information is not material to the patentability of any claim remaining under consideration in the application. There is no duty to submit information which is not material to the patentability of any existing claim. The duty to disclosure all information known to be material to patentability is deemed to be satisfied if all information known to be material to patentability of any claim issued in a patent was cited by the Office or submitted to the Office in the manner prescribed by §§1.97(b)-(d) and 1.98. However, no patent will be granted on an application in connection with which fraud on the Office was practiced or attempted or the duty of disclosure was violated through bad faith or intentional misconduct. The Office encourages applicants to carefully examine:

(1) Prior art cited in search reports of a foreign patent office in a counterpart application, and

(2) The closest information over which individuals associated with the filing or prosecution of a patent application believe any pending claim patentably defines, to make sure that any material information contained therein is disclosed to the Office.

(b) Under this section, information is material to patentability when it is not cumulative to information already of record or being made or record in the application, and

(1) It establishes, by itself or in combination with other information, a prima facie case of unpatentability of a claim; or

(2) It refutes, or is inconsistent with, a position the applicant takes in:

(i) Opposing an argument of unpatentability relied on by the Office, or

(ii) Asserting an argument of patentability.

A prima facie case of unpatentability is established when the information compels a conclusion that a claim is unpatentable under the preponderance of evidence, burden-of-proof standard, giving each term in the claim its broadest reasonable construction consistent with the specification, and before any consideration is given to evidence which may be submitted in an attempt to establish a contrary conclusion of patentability.

(c) Individuals associated with the filing or prosecution of a patent application within the meaning of this section are:

(1) Each inventor named in the application;

(2) Each attorney or agent who prepares or prosecutes the application; and

(3) Every other person who is substantively involved in the preparation or prosecution of the application and who is associated with the inventor, with the assignee or with anyone to whom there is an obligation to assign the application.

(d) Individuals other than the attorney, agent or inventor may comply with this section by disclosing information to the attorney, agent, or inventor.